

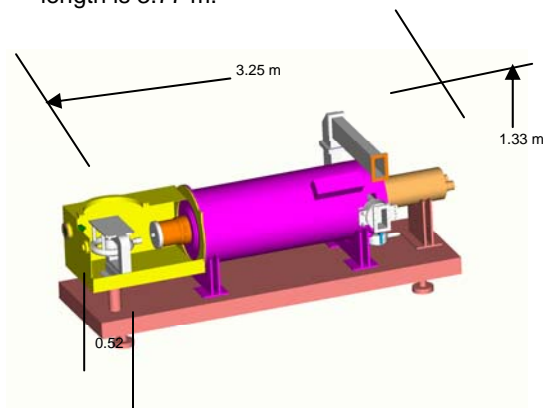
## NOTES FROM 10.12.05 PROTON DRIVER MEETING - CIVIL

Attendees: Bill Foster, Rich Stanek, Dixon Bogert, Jerry Leibfritz, Kamran Vaziri, Mike Andrews, Bob Webber, Steve Wesseln, Chris Jensen, Al Moretti, Rod Walton, Lee Hammond, Gary VanZandbergen, Chuck Federowicz, John Santic, Ed Crumpley, Elaine McCluskey

### ITEMS DISCUSSED:

#### 1. Review of typical RF station layout for vertical and horizontal with Chris Jensen & Al Moretti:

- Chris confirmed that it's ok to put the RF station equipment side by side, except as required for moving it. Concluded need to allow 6" between pulse transformer and next piece of equipment.
- Clearance under equipment will be 15" and will be achieved by stands that Jerry et al will build after equipment is ordered. This dimension should be included on all equipment layouts, except modulator, which will stay low (4").
- Bill noted that the standard rf station length (which has been used as 60 feet) is related to the length of a cryomodule, at the proportion of rf station = 1.5 x cryomodule. This may mean a few inches difference from the 60 ft. Discussed advantages to making the length in even inches. Will be determined in the future. This is related to the beam sheet, which is still not yet produced.
- Horizontal klystron length: what is this? Bill sent around slide from prior presentations that shows length is 3.77 m.



- Vertical klystron: discussion of what gets removed when klystron needs servicing. Can solenoid go with klystron? Agree that entire transformer and socket could all move together & do lifting at front end. Best this would be to lift klystron out of solenoid – may add 8 ft to height of building – need to be able to grab klystron at the top. Lead shielding would be removed prior to lifting.
- Need to have waveguide layout. Determined that Al will provide into to Steve W working with Jerry to get visual of waveguide layout. Then can transfer to civil drawings.
- Waveguide penetrations: may need 2 instead of one to better facilitate routing underground. Kamran is iterating on radiation shielding analysis for various penetration scenarios, and documenting such in reports.
- Cooling of waveguides in penetrations? Al says we should plan on this.

#### 2. 540 Building areas:

- Gary showed latest layout
- Stairs up and over versus down and under: Elaine explained that cost differential is minimal. Life safety analysis will tell us whether down and under is acceptable. Need ability to fund outside consultants before that can occur – need CD-0.
- Briefly discussed outside utilities and how they will enter the building. More on this in future meetings. Agreed that we needed to have Maurice Ball for LCW discussion at 11/9 meeting.

### Actions:

- Steve Wesseln will work with Gary and Al to get drawing of waveguide arrangement.
- Bob W to try to get information on optimum location of cable penetrations in each RF station
- Elaine will invite Chris, Dan, Al, Maurice to 11/9/05 meeting to discuss process water cooling

Next meeting scheduled for 11/9/05 at 9:30 in WH5NE